

Title (en)

Polymers having decreased surface energy.

Title (de)

Polymere, die eine niedrigere Oberflächenenergie aufweisen.

Title (fr)

Polymères ayant une surface à basse énergie.

Publication

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Application

**EP 94850160 A 19940921**

Priority

US 12638293 A 19930923

Abstract (en)

A method for forming a polymer with a decreased surface energy. The method comprises the steps of mixing from about 99.5% to about 95.0% of a polymer selected from the group consisting of polyolefin and polyester with from about 0.5% to about 5.0% of a surface modifying agent having the structure  $R<1>-A-Si(R<2>R<3>)-O-[Si(R<4>R<5>)-O]_n-Si(R<6>R<7>)-A-R<8>$ , and forming the mix of polymer and additive to a desired form.  $R<1>$  and  $R<8>$  are selected from the group consisting of derivatives of aliphatic or aliphatic/aromatic alcohols or mono-acids with a molecular weight of between about 250 to about 600 daltons, and A is selected from the group consisting of -O-, -NH-C(O)-NH-(CH<sub>2</sub>)<sub>3</sub>-, and -C(O)-NH-(CH<sub>2</sub>)<sub>3</sub>-. The agent is substantially intimately mixed with the polymer. The present invention also discloses a polymeric material with an increased surface energy prepared according to the method, a release liner, a method for forming injection molded or blow molded polymeric articles where the articles have a non-fugitive release agent, and a film extrusion processing aid comprising an additive for compounding with a polymeric composition being extruded.

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